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60/331,045 7 November 2001 (07.11.2001) US

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(71) Applicants and

(72) Inventors: **MAURER, Patrick** [DE/CH]; Richenbergstrasse 38, CH-8400 Winterthur (CH). **LECHNER, Franziska** [CH/CH]; Froschaugasse 12, CH-8001 Zürich (CH). **ORTMANN, Rainer** [DE/FR]; 3, Rue de l'amitié, F-68300 Saint Louis (FR). **LÜÖND, Rainer** [CH/CH]; Felsplattenstrasse 33, CH-4106 Therwil (CH). **STAUFENBIEL, Matthias** [DE/DE]; Müllerweg 7, D-79541 Lörrach (DE). **FREY, Peter** [CH/CH]; Sulgenauweg 45, CH-3007 Bern (CH).

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(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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(57) Abstract: The present invention is related to the fields of molecular biology, virology, immunology and medicine. The invention provides a composition comprising an ordered and repetitive antigen or antigenic determinant array. The invention also provides a process for producing an antigen or antigenic determinant in an ordered and repetitive array. The ordered and repetitive antigen or antigenic determinant is useful in the production of vaccines for the treatment of infectious diseases, the treatment of allergies and as a pharmaccine to prevent or cure cancer and to efficiently induce self-specific immune responses, in particular antibody responses.

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Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	WO 01 62284 A (NIELSEN KLAUS GREGORIUS ;BIRK PETER (DK); JENSEN MARTIN ROLAND (DK) 30 August 2001 (2001-08-30) page 33; claim 1 ---	1-53
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			JP 2002528393 T	03-09-2002
			WO 0023955 A1	27-04-2000
			US 2002081295 A1	27-06-2002
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			BR 9915771 A	26-12-2001
			CN 1333693 T	30-01-2002
			EP 1135162 A2	26-09-2001
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			PL 348452 A1	20-05-2002
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## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IB 02/00168

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>SCHENK D ET AL: "Immunization with amyloid-beta attenuates Alzheimer -disease-like pathology in the PDAPP mouse 'see comments!'" NATURE, MACMILLAN JOURNALS LTD. LONDON, GB, vol. 400, no. 6740, 8 July 1999 (1999-07-08), pages 173-177, XP002154168 ISSN: 0028-0836 cited in the application the whole document</p>	1-53
P, A	<p>WO 01 85208 A (BACHMANN MARTIN ;DUNANT NICOLAS (CH); SEBBEL PETER (CH); TISSOT AL) 15 November 2001 (2001-11-15) cited in the application page 60; claim 1</p>	1-53
T	<p>FRENKEL D ET AL: "Generation of auto-antibodies towards Alzheimer's disease vaccination." VACCINE, vol. 19, no. 17-19, 2001, pages 2615-2619, XP002212470 ISSN: 0264-410X abstract</p>	1-53

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB 02/00168

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0162284	A	30-08-2001	AU 3362001 A	03-09-2001
			WO 0162284 A2	30-08-2001
WO 0023955	A	27-04-2000	AU 1214300 A	08-05-2000
			EP 1123114 A1	16-08-2001
			JP 2002528393 T	03-09-2002
			WO 0023955 A1	27-04-2000
			US 2002081295 A1	27-06-2002
WO 0032227	A	08-06-2000	AU 1402000 A	19-06-2000
			BR 9915771 A	26-12-2001
			CN 1333693 T	30-01-2002
			EP 1135162 A2	26-09-2001
			WO 0032227 A2	08-06-2000
			PL 348452 A1	20-05-2002
WO 0185208	A	15-11-2001	AU 5245801 A	20-11-2001
			WO 0185208 A2	15-11-2001